

REMARKS

This application has been reviewed in light of the Final Office Action mailed on October 21, 2003. Claims 1-59 are pending in the application with Claims 1, 44, 50, 56 and 59 being in independent form. Claims 2, 3, 5, 7-13, 15-24, 26-31, 33-39, 43-49 and 53-58 have been withdrawn from consideration. By the present amendment, Claims 1, 4, 6, 50 and 59 have been amended and previously withdrawn Claims 44-49 and 56-58 have been canceled. No new matter or issues are believed to be introduced by the amendments.

Applicant wishes to thank the Examiner for the courtesy of granting and conducting an interview with the Applicant and Applicant's representative on December 17, 2003. During the interview, limitations were discussed for overcoming the rejection under 35 U.S.C. §102(b) with respect to Claims 1, 4, 6, 14, 21, 23, 25, 50-52 and 59 and the double patenting rejection with respect to Claims 1, 4, 6, 14, 21, 23, 25, 32, 40-42 and 50-52. Applicant has amended independent Claims 1, 50 and 59 in a manner which is believed to incorporate the discussed limitations and place all currently pending claims in condition for allowance.

The Examiner indicated to the Applicant and Applicant's representative during the interview that by adding the discussed limitations new issues would be raised that would require further consideration and/or search. Since the independent claims have been amended to incorporate the limitations discussed during the interview and in lieu of the Examiner's indication that new issues would be raised by adding these limitations, the Applicant is simultaneously filing with this Preliminary Amendment a Request for Continued Examination Under 37 C.F.R. Sec. 1.114 (RCE). It is respectfully submitted that the filing of the RCE would enable the Examiner to consider the amendments made to the claims and would also expedite the

prosecution of the subject application.

Before addressing the rejection under 35 U.S.C. §102(b) and the double patenting rejection, Applicant respectfully submits that independent Claims 1 and 50 are generic. Accordingly, Applicant respectfully requests reconsideration of previously withdrawn dependent Claims 2, 3, 5, 7-13, 15-24, 26-31, 33-39, 43 and 53-55 which depend from generic, independent Claims 1 and 50 in accordance with 37 C.F.R. §1.141.

Claims 1, 4, 6, 14, 21, 23, 25, 50-52 and 59 were rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,013,241 issued to von Gutfeld et al. on May 7, 1991 ("von Gutfeld et al.").

Applicant has amended independent Claims 1, 50 and 59 in a manner which is believed patentably distinguishes Applicant's invention over the tool disclosed by von Gutfeld et al.

Claim 1 has been amended to recite:

A nozzle for ultrasound wound treatment, for producing a spray of liquid using an ultrasound transducer tip, directing and delivering said spray onto the wound surface, comprising: a main body having a proximal end that removably attaches to an ultrasound transducer, said main body also having a distal end which is marginally close to a distal end of the ultrasound transducer tip, said distal end of said main body having a gap with said distal end of said ultrasound transducer tip, said distal end of main body being coaxially placed about said ultrasound transducer tip, said main body being connected with at least one reservoir, for holding and delivering a wound treatment solution at a most distal end of said ultrasound transducer tip via an opening disposed about the most distal end of the ultrasound transducer tip for producing said spray. (Emphasis added)

Claims 50 and 59 have been amended to recite similar recitations as the recitations added to Claim 1.

von Gutfeld et al. does not disclose or suggest at least the newly added limitations to Claims 1 and 50. von Gutfeld et al. is directed to an ultrasonic jet dental tool and method for

removing plaque from teeth and for cleaning teeth. Ultrasonic energy is coupled into a liquid stream to sonicate the liquid stream and create a sonicated jet stream (not a spray) that is delivered to teeth to be cleaned. The tool includes a reservoir 10 containing a liquid, means for creating a liquid stream 14, and a transducer means 16 for creating ultrasonic energy for sonicating the liquid stream to create a sonicated (or sonified, as described by von Gutfeld et al.) jet stream. A housing 20 is included for containing the liquid, a nozzle 22 from which the sonicated jet stream (not a spray) exits, tubing 24 for delivering the liquid from the reservoir 10 to the housing 20, and a pump 26 for moving the liquid from the reservoir 10 to the housing 20 and the nozzle 22.

The transducer means 16 is contained within the housing 20 where it is immersed in liquid. Further, in the tool disclosed by von Gutfeld et al., a distal opening of the tubing 24 is not disposed about the most distal end of the transducer means 16. Therefore, the tubing 24 delivers the liquid to the housing 20 behind the distal tip or the radiation surface of the transducer means 16 (i.e., the tubing 24 does not deliver the liquid at a most distal end of the transducer means 16) to fill the housing 20 with liquid and immerse the transducer means 16 therein.

This is structurally different from Applicant's nozzle and apparatus as recited by Claims 1, 50 and 59, where the transducer is not immersed in liquid, and a wound treatment solution or fluid is delivered at a most distal end of the ultrasound transducer via an opening or dispensing orifice disposed about the most distal end.

Accordingly, von Gutfeld et al. does not disclose or suggest at least the newly added limitations to Claims 1, 50 and 59. Specifically, von Gutfeld et al. does not disclose or suggest the housing or main body being connected with at least one reservoir, for holding and delivering

liquid or a wound treatment solution at a most distal end of an ultrasound transducer tip via an opening disposed about the most distal end of the ultrasound transducer tip for producing a spray, as recited by Applicant's Claim 1. Further, von Gutfeld et al. does not disclose or suggest a transducer having a most distal end and a fluid source for introducing a fluid to the distal radiation surface via an opening disposed about the most distal end of the transducer to produce a spray, as recited by Applicant's Claim 50.

Further still, von Gutfeld et al. does not disclose or suggest a liquid propagation path defining a dispensing orifice and in fluid communication with a liquid reservoir for directing liquid from within the liquid reservoir to a most distal end of an ultrasound transducer via the dispensing orifice, wherein said dispensing orifice is disposed about the most distal end of said ultrasound transducer, as recited by Applicant's Claim 59. Accordingly, withdrawal of the rejection under 35 U.S.C. §102(b) with respect to Claims 1, 50 and 59 and allowance of Claims 1, 50 and 59 are respectfully requested.

Claims 4, 6, 14, 21, 23, 25, 51 and 52 depend from Claims 1 and 50, and therefore include the limitations of Claims 1 and 50. Accordingly, for the same reasons given for Claims 1 and 50, Claims 4, 6, 14, 21, 23, 25, 51 and 52 are believed to contain patentable subject matter. Accordingly, withdrawal of the rejection under 35 U.S.C. §102(b) with respect to Claims 4, 6, 14, 21, 23, 25, 51 and 52 and allowance of Claims 4, 6, 14, 21, 23, 25, 51 and 52 are respectfully requested.

Claims 32 and 40-42 were rejected under 35 U.S.C. §103(a) as being unpatentable over von Gutfeld et al.

Claims 32 and 40-42 depend from Claim 1, and therefore include the limitations of Claim 1. Accordingly, for the same reasons given for Claim 1, Claims 32 and 40-42 are believed to contain patentable subject matter. Accordingly, withdrawal of the rejection under 35 U.S.C. §103(a) and allowance of Claims 32 and 40-42 are respectfully requested.

The Examiner further rejected Claims 1, 4, 6, 14, 21, 23, 25, 32, 40-42 and 50-52 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claims 1-8 of U.S. Patent No. 5,076,266.

U.S. Patent No. 5,076,266 is directed to a device for ultrasonic atomizing of a liquid medium comprising an ultrasonic vibrator (1) with a concentrator (2) whose terminal portion (4) accommodates a bell mouth (24) which serves as a means for regulating the liquid medium spray cone angle. Main, additional, and auxiliary thrust bushings (3,5,6) are installed on the ultrasonic vibrator (1) and concentrator (2). Arranged along the concentrator (2) are a branch pipe (9) for feeding a liquid medium and a guide (8) mechanically connected with the main and additional thrust bushings (3 and 5) whose free ends extend through respective hollow rods (15 and 16) mechanically linked with the auxiliary thrust bushing (6).

Claim 1 of the '266 patent recites:

A device for ultrasonic atomizing of a liquid medium, comprising:
an ultrasonic vibrator (1) communicating with a concentrator (2);
a main thrust bushing (3) wherein the ultrasonic vibrator (1) is mounted;
an additional thrust bushing (5) encompassing the concentrator (2);
an auxiliary thrust bushing (6) whose body has a radial channel (17) whose outlet is on an internal surface (21) of the bushing which encompasses a terminal portion (4) of the concentrator (2);
a guide (8) mechanically connected with the main and additional thrust bushing (3 and 5) and having a free guide end;
a branch pipe (9) to feed a liquid medium, which is arranged along a geometrical longitudinal axis (7) of the concentrator (2), and is mechanically connected to the main

thrust bushing (3) and has a free end (12) extending through the additional thrust bushing (5);

two hollow rods (15,16) each having one end mechanically connected with the auxiliary thrust bushing (6) and having distal ends (13, 14) into which are movably inserted the free end of the guide (8) and the branch pipe (9) wherein the rod, into which the branch pipe is inserted, is associated with the radial channel (17) for feeding a liquid medium to the terminal end of the concentrator; and

a means for regulating a liquid medium spray cone angle, which arranged concentric with and on said terminal portion (4) of the concentrator (2) to provide a uniform spray with a selected cone angle.

It is Applicant's belief that at least the underlined portions of Claim 1 of the '266 patent recite patentably distinct features over features recited by the presently pending and not withdrawn claims. Additionally, the device disclosed and claimed by Claims 1-8 of the '266 patent is not a nozzle as Applicant's instant invention as recited by Claims 1, 4, 6, 14, 21, 23, 25, 32 and 40-42 of the present application.

It is also Applicant's belief that dependent Claims 2-8 of the '266 patent also recite patentably distinct features over features recited by the presently pending and not withdrawn claims. In particular, Claims 2-8 recite structurally unique features to the device disclosed by the '266 patent.

From a different perspective, Applicant's pending and not withdrawn independent claims also recite patentably distinct features over Claims 1-8 of the '266 patent. Applicant's Claim 1 recites as follows:

A nozzle for ultrasound wound treatment, for producing a spray of liquid using an ultrasound transducer tip, directing and delivering said spray onto the wound surface, comprising: a main body having a proximal end that removably attaches to an ultrasound transducer, said main body also having a distal end which is marginally close to a distal end of the ultrasound transducer tip, said distal end of said main body having a gap with said distal end of said ultrasound transducer tip, said distal end of main body being coaxially placed about said ultrasound transducer tip, said main body being connected with at least one reservoir, for holding and

delivering a wound treatment solution at a most distal end of said ultrasound transducer tip via an opening disposed about the most distal end of the ultrasound transducer tip for producing said spray. (Emphasis added)

It is Applicant's belief that at least the underlined portions recite features of Applicant's invention that are patentably distinct over features recited by Claims 1-8 of the '266 patent. That is, the features of a nozzle for ultrasound wound treatment comprising a main body having a proximal end that removably attaches to an ultrasound transducer having an ultrasound transducer tip, and delivering a wound treatment solution at a most distal end of the ultrasound transducer tip via an opening disposed about the most distal end of the ultrasound transducer tip for producing a spray are patentably distinct features over features recited by Claims 1-8 of the '266 patent.

Applicant's Claim 50 recites as follows:

An apparatus for treating a wound comprising: a transducer having a most distal end, said most distal end having a distal radiation surface configured for being arranged in proximity to the surface of the wound and for emitting ultrasonic energy; and a fluid source for introducing a fluid to the distal radiation surface via an opening disposed about the most distal end of the transducer to produce a spray, wherein the generated ultrasonic energy is delivered to the wound through the spray, and wherein the ultrasonic energy provides a bactericidal and a therapeutic effect for decreasing the healing time for the wound. (Emphasis added)

It is also Applicant's belief that at least the underlined portion recites features of Applicant's invention that are patentably distinct over features recited by Claims 1-8 of the '266 patent. That is, the features of a fluid source for introducing a fluid to a distal radiation surface via an opening disposed about the most distal end of a transducer to produce a spray are patentably distinct features over features recited by Claims 1-8 of the '266 patent.

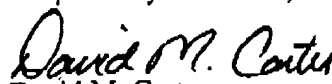
For at least the above-stated reasons, Claims 1, 4, 6, 14, 21, 23, 25, 32, 40-42 and 50-52 of the present application are patentably distinct over Claims 1-8 of the '266 patent.

Accordingly, withdrawal of the obviousness-type double patenting rejection with respect to Claims 1, 4, 6, 14, 21, 23, 25, 32, 40-42 and 50-52 over Claims 1-8 of the '266 patent is respectfully requested.

In view of the foregoing amendments and remarks, it is respectfully submitted that all claims presently pending in the application and not withdrawn from consideration, namely, Claims 1, 4, 6, 14, 21, 23, 25, 32, 40-42, 50-52 and 59, are believed to be in condition for allowance and patentably distinguishable over the art of record. Applicant also respectfully requests the reconsideration of previously withdrawn dependent Claims 2, 3, 5, 7-13, 15-24, 26-31, 33-39, 43 and 53-55 which depend from generic, independent Claims 1 and 50 in accordance with 37 C.F.R. §1.141.

If the Examiner should have any questions concerning this communication or feels that an interview would be helpful, the Examiner is requested to call Applicant's undersigned attorney at (631) 501-5706.

Respectfully submitted,



David M. Carter
Reg. No. 30,949
Attorney for Applicant

Send Correspondence To:

Carter, DeLuca, Farrell & Schmidt, LLP
George Likourezos, Esq.
445 Broad Hollow Road
Melville, New York 11747
631-501-5701
FAX: 631-501-3526